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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,708	09/06/2005	Yoshitaka Sato	GUA UTO 318	8392

7590  
The Gates Corporation  
1551 Wewatta Street  
Denver, CO 80202

04/04/2007

EXAMINER
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PILKINGTON, JAMES

ART UNIT	PAPER NUMBER
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3682

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/523,708

Applicant(s)

SATO ET AL.

Examiner

James Pilkington

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the scooter (clm 15) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

2. Claim 12 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 1. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takehiko Ito, USP 2001/0039226, in view of Kumazaki, USP 5,674,143.

Re clms 1, 3 and 12, Takehiko ('226) discloses a transmission belt (60) comprising: a belt body (62) which is molded from a stock rubber; aramid fibers (80, 114) that are intermixed in said belt body (62) and oriented in a predetermined direction of said belt body (p 3, paragraphs 51, 52, 53) ; and polyester fibers (80, 114) that are intermixed in said belt body (62) and oriented in said predetermined direction (p 3, paragraphs 51, 52, 53) ; wherein said polyester fibers are longer than said aramid fibers(p 3, paragraphs 51, 52, 53) .

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Takehiko does not disclose that the belt body is made of both aramid fibers and polyester fibers and that the fibers make up 5-30 parts by weight of the stock rubber of the belt.

Kumazaki teaches that a belt can be made of a combination of aramid and polyester fibers (C4/L43-55) and that the fibers make up 5-30 parts by weight of the stock rubber of the belt (C4/L56-60) for the purpose of reducing the noise in the belt and increase durability (C5/L1-9).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Ito and provide a belt can be made of a combination of aramid and polyester fibers and having the fibers make up 5-30 parts by weight of the stock rubber, as taught by Kumazaki, for the purpose of reducing the noise in the belt and increase durability.

Re clm 2, Takehiko ('226) discloses the aramid fibers (114) and polyester fibers (114) are oriented in a width direction of said belt body (p 3, paragraph 53).

Re clm 4, Takehiko ('226) discloses length of said aramid fibers (114) is less than 3 mm (p 3, paragraph 52, fibers range from 1 to 10 mm).

Re clm 5, Takehiko ('226) discloses the length of said polyester fibers (114) is less than 5 mm (p 3, paragraph 52, fibers range from 1 to 10 mm).

Re clm 6, Takehiko ('226) discloses a rubber component of said stock rubber is one of ethylene propylene copolymer, ethylene propylene, diene nitrile butadiene

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rubber, hydrogenated terpolymer, nitrile butadiene rubber, and chloroprene rubber (p 3, paragraph 51).

Re clm 7, Takehiko ('226) discloses the said polyester fibers are subjected to a treatment involving coating with a resorcinol-formalin-latex (p 3, paragraph 55).

Re clm 9, Kumazaki ('143) discloses that the aramid fibers can be para-aramid fibers (C4/L48-49).

Re clm 10, Takehiko ('226) discloses said transmission belt is a V-belt (60, see figure 3, sides at angle).

Re clm 11, Takehiko ('226) discloses said V-belt (60) is a cogged V-belt (see figure 1, 72,74).

Re clms 13 and 14, Takehiko ('226) discloses a transmission belt (60) comprising: a belt body (62) which is molded from a stock rubber comprising a top rubber layer (82), a bottom rubber layer (80) and a cord (84) extending in the longitudinal direction of the belt embedded between the top rubber layer (82) and the bottom rubber layer (80) said bottom layer (80) having cogs (70 and 72); aramid fibers (80, 114) that are intermixed in said belt body (62) and oriented in a predetermined direction of said belt body (p 3, paragraphs 51, 52, 53) ; and polyester fibers (80, 114) that are intermixed in said belt body (62) and oriented in said predetermined direction (p 3, paragraphs 51, 52, 53) ; wherein said polyester fibers are longer than said aramid fibers(p 3, paragraphs 51, 52, 53); the length of said aramid fibers (114) is less than 3

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mm (p 3, paragraph 52, fibers range from 1 to 10 mm) and the length of said polyester fibers (114) is less than 5 mm (p 3, paragraph 52, fibers range from 1 to 10 mm) .

Takehiko does not disclose that the belt body is made of both aramid fibers and polyester fibers and that the fibers make up 5-30 parts by weight of the stock rubber of the belt.

Kumazaki teaches that a belt can be made of a combination of aramid and polyester fibers (C4/L43-55) and that the fibers make up 5-30 parts by weight of the stock rubber of the belt (C4/L56-60) for the purpose of reducing the noise in the belt and increase durability (C5/L1-9).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Ito and provide a belt can be made of a combination of aramid and polyester fibers and having the fibers make up 5-30 parts by weight of the stock rubber, as taught by Kumazaki, for the purpose of reducing the noise in the belt and increase durability.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takehiko '226 in view of Kumazaki '143 and further in view of Kodama, USP 5,908,520.

Takehiko in view of Kumazaki discloses all of the claim limitations (as described above).

Takehiko in view of Kumazaki does not disclose said polyester fiber is one of PET fiber.

Kodama teaches PET fiber to be a polyester fiber (c2, l 12-13). PET fiber has a higher modulus of elasticity than other fibers. This allows for an increase in strength of the composition that the PET fiber is a component of.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to use PET fiber as the polyester fiber, as taught by Kodama, in the v-belt of Takehiko in view of Kumazaki, to increase the modulus of elasticity of the belt.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takehiko '226 in view of Kumazaki '143 and further in view of Kinoshita, USP 6,132,328.

Takehiko in view of Kumazaki discloses all of the claim limitations (as described above).

Takehiko in view of Kumazaki does not disclose that the stock rubber is formed of EPDM, in which an organic metal salt is mixed.

Kinoshita teaches making the stock rubber of EPDM in which an organic metal salt is mixed (C3/L23-43) for the purpose of providing a belt that exhibits good heat resistance and ozone resistance (C3/L30-33).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to make the stock rubber of EPDM in which an organic metal salt is mixed, as taught by Kinsohita, for the purpose of providing a belt that exhibits good heat resistance and ozone resistance.



***Response to Arguments***

7. Applicant's arguments filed 2/22/07 have been fully considered but they are not persuasive.

8. The applicant argues on page 6 that the examiner has not provided prior art that teaches or suggests all claim limitations. The applicant further goes on to state that it is Kumazaki that does not disclose using a blend of fibers, including aramid and polyester fibers, having different lengths.

The examiner disagrees and first directs the applicant to the office action above where Kumazaki is only being used to teach a blend of fibers consisting of aramid and polyester. Support for this teaching is clearly found in the Kumazki reference in C4/L43-55 where it states "The **para-aramid fiber** can be used alone or in combination with a) nylon, vinylon, **polyester**, or meta-aramid..." The disclosure of different lengths of fibers is found in the Ito reference where Ito discloses that when using said fibers it is preferred to use aramid fibers ranging from 3-5 mm and polyester fibers ranging 5-10 mm (paragraph 0052).

9. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning (page 7), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge

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which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case knowledge that a blend of fibers consisting of aramid and polyester was known in the art and clearly disclosed in Kumazaki.

10. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Kumazaki provides motivation for using aramid fibers or a blend of aramid fibers and polyester fibers for the purpose of reducing the noise in the belt and increase durability (C5/L1-9) as a single fiber or a blend of two or more reduces the noise and increases durability when the fiber or fibers are present in an amount of 5-25 parts by weight (C4/L43-C5/L9).

11. In response to applicant's argument that Ito and Kumazaki are nonanalogous art since they address distinct and separate problems, *it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be*

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reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, as noted by the applicant (page 8 line 2 of remarks), both pieces are prior art are found in the same field as the applicants endeavor (transmission belts).

12. Regarding the applicant's arguments pertaining to unexpected results the examiner directs the applicant to MPEP § 716.01 and 716.02. In particular section 716.02 states "any differences between the claimed invention and the prior art may be expected to result in some differences in properties. The issue is whether the properties differ to such an extent that the difference is really unexpected." In this case the instant applicant has modified the lengths of fibers within the belt structure which will indeed result in some difference in properties, but are these difference unexpected? In the absence of any disclosure of what was expected to happen by modifying the lengths of the fibers the examiner cannot ascertain if the results are truly unexpected. Mere allegation that the results of the modification are unexpected or the submission of test data is not significant evidence that the results are truly unexpected. The examiner invites the applicant to submit any necessary affidavits or declarations that contain evidence that the results are truly unexpected.

13. Regarding applicant's argument directed toward the rejection of claim it. It is the examiner's position that a prima facie case has been established for the limitations of

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the independent claim 1. Therefore, claim 8 stands rejected under Ito in view of Kumazaki and further in view of Kodama.

14. In response to applicant's arguments, the recitation "a single strand cogged v-belt" (page 10) has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

15. The applicant argues that Ito does not disclose that the aramid fibers are less than 3mm and the polyester fibers are a less than 5mm (page 10).

The examiner agrees that Ito does disclose that the fibers are preferably in the range of 3-5 mm for aramid fibers and 5 to 10 mm for polyester fibers. However, Ito does indeed disclose an overall preferably length of all fibers being 1 to 10 mm. Because of this disclosure Ito does indeed disclose that the fibers can be less than 3 mm and less than 5 mm, respectively.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Whitfield, USP 6,358,171 (owned by the same assignee as the instant application) also discloses that it is possible to use a blend of aramid and polyester fibers ranging in a length of 0.1 to 10 mm and present in an amount of 0.5 to 20 parts per 100 weight parts of the belt.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Pilkington whose telephone number is 571-272-5052. The examiner can normally be reached on 7:30am-4pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JP  
JP 3/28/07

  
RICHARD RIDLEY  
SUPERVISORY PATENT EXAMINER